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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,489	11/10/2000	Kenneth A. Honer	S99-190	5331

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LUMEN INTELLECTUAL PROPERTY SERVICES, INC.
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EXAMINER

VU, DAVID

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/710,489

Applicant(s)

HONER, KENNETH A.

Examiner

DAVID VU

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 17-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, “a complimentary metal oxide semiconductor (CMOS) circuitry” must be shown or the features canceled from the claim 8. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Regarding claim 13, it is not clear how the structure of claim 13 “is characterized as having an essentially buckling-free deformation configuration”. A dependent product claim must contain all of the structural limitations of the independent claim. Due to the indefinite nature of claim 13, no art rejection has been applied.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not include the sufficient description to allow one skill in the art to make and use “wherein said operation semiconductor circuitry is a complimentary metal oxide semiconductor (CMOS) circuitry”.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Regarding claim 14, the expression “predetermined”, as recited in claim 14 render the same indefinite since it is not clear what such may include. Clarification of the above is requested.

7. Regarding claims 9 and 10, it is not clear how the structure of claim 1 does not have “sealing layer”, since “sealing layer” is required in the dependent claims 9 and 10. A dependent product claim must contain all of the final structure limitations of the independent claim. Due to the indefinite nature of claims 9 and 10, no art rejection has been applied.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 6 and 11-16 are rejected under 35 U. S. C. 102(b) as being anticipated by Tang et al (US 5,025,346).

Regarding claims 1, Tang et al, in related text (Col. 6, Line 55- Col. 7, Line 52) and figure (Fig. 4I) disclose a microstructure comprising a silicon structure 55 being positioned on a work piece 50 together with an operational circuitry 54 and being formed on top of a sacrificial layer 56. Note that polysilicon 55 is comprised silicon and the polysilicon layer 54 serves as an electrode (Col. 7, lines 5-6).

Regarding claim 13, Tang et al, Fig. 4I, discloses a microstructure having a buckling-free deformation configuration.

Regarding claim 15, it would have been obvious to one of ordinary skill in the art at the time the invention was made to consider the silicon structure 55 is formed as multiple-sequentially silicon layers 55 (Fig. 4I) composed of the same material since separating what was once one layer, into many layers, involves only routine skill in the art.

Regarding claims 1, 11, 12 and 16, the limitation "sputtered" or "doped with 40-80 ppm boron" is taken to be a product by process limitation and consider non-limitation. In a product-by-process claim, it is the patentability of the claimed product and not of the recited process steps which must be established. Therefore, when the prior art discloses a product which reasonably appears to be identical with or only slightly different than the product claimed in a product-by process claim, a rejection based on sections 102 or 103 is fair. The Patent Office is not equipped to manufacture products by a myriad of processes put before it and then obtain prior art product and make physical comparisons therewith. In re Brown, 173 USPQ 685 (CCPA 1972). Also, a product by process claim directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ I S at 17 (footnote 3)). See In re Fessman, 180 USPQ 324, 326 (CCPA 1974); In re Marosi et al., 218 USPQ 289, 292 (Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process steps, which must be determined in a " product by process" claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old and obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

Note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ

685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above caselaw makes clear.

Regarding claims 6, 14 and 16, noted that Tang et al. teaches a micro-machined structure comprising the same structure and material as that of the claimed invention. Therefore, it would have inherently performed the same function. Additionally, claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F. 2d 844, 847, 120 USPQ 528, 531 (CCPA 1959).

"[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F. 2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

9. Claims 1, 2 and 7 are rejected under 35 U. S. C. 102(b) as being anticipated by Yagi et al (US 5,658,698).

Regarding claims 1, 2 and 7, Yagi et al, in related figures (Figs. 3, 4K, 10L) disclose a silicon structure 2 being coupled to an operational circuitry includes an aluminum-metalization 3 and a conductive layer 16 in contact with core silicon layer 2.

10. Claims 1-5, 7, 9, 10 and 15 are rejected under 35 U. S. C. 102(b) as being anticipated by Mitchell et al. (US 5,573,679).

Regarding claims 1-5, 7, 9, 10 and 15, Mitchell et al., in related figures (Fig. 1) disclose a silicon structure 24 being coupled to an operational circuitry includes an aluminum-metalization 16 and a first conductive TiN layer 28 in contact and on top of core silicon layer 24, a second conductive TiN layer 26 in contact and below core silicon layer 24, wherein first and second TiN layers have essentially the same shape as core silicon layer 24 (Col. 5, lines 33-46); the microstructure further comprising SiN sealing layer 20.

Response to Arguments

11. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is (703) 305-0391. The examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm. If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms., can be reached on (703) 308-4910.

DV

David Vu.


David Nelms
Supervisory Patent Examiner
Technology Center 2800